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Enhancing Home Care Quality for Trauma Patients: A Qualitative Content Analysis

***Shima Farokhi*[1], *Azim Azizi*[2,3]*, *Masoud Khodaveisi*[2,3], *Eesa Mohammadi*[4], *Khodayar Oshvandi*[3,5]**

[1]*Student Research Committee, Hamadan University of Medical Sciences, Hamadan, Iran*
[2]*Chronic Diseases (Home Care) Research Center, Institute of Cancer, Avicenna Health Research Institute, Hamadan University of Medical Sciences, Hamadan, Iran*
[3]*School of Nursing and Midwifery, Hamadan University of Medical Sciences, Hamadan, Iran*
[4]*Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran*
[5]*Mother and Child Care Research Center, Institute of Health Sciences and Technologies, Avicenna Health Research Institute, Hamadan University of Medical Sciences, Hamadan, Iran*

***Corresponding author:** *Azim Azizi*
Address: Department of Medical-Surgical Nursing, School of Nursing and Midwifery, Hamadan aUniversity of Medical Sciences, Hamadan, Iran. **Tel:** +98 81 38380535; **Fax:** +98 81 38380447;
e-mail: Azimazizi1360@gmail.com

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ABSTRACT

Objectives: This study aimed to identify strategies for enhancing the quality of home care for trauma patients.
Methods: Using a conventional qualitative content analysis approach, this study was conducted from September 2023 to September 2024 in Hamadan, located in northwest Iran. A total of 18 participants, including home care managers, nurses, trauma patients, and the family members of trauma patients, were selected through purposive sampling. Data were collected using semi-structured interviews and analyzed using Graneheim and Lundman's method with the assistance of MAXQDA software (version 20).
Results: Analysis of the data yielded 430 initial codes, which were categorized into 36 subcategories and 6 main categories: patient-centered care, safe care provision, spiritual care, effective educational program development, service effectiveness enhancement, and dynamic service delivery.
Conclusion: The study results showed that nurses employed various strategies to improve the quality of home care services for trauma patients. Key strategies included adhering to the principle of patient-centered care, providing safe care for trauma patients, providing spiritual care, developing effective educational programs, enhancing service effectiveness, and ensuring dynamism in service delivery. Implementing these strategies could guide policymakers and home care nurses to improve care quality for trauma patients and increase satisfaction. The findings of the present study can enhance the planning and implementation of home care services, facilitating the transition from hospital to home for trauma patients.

Keywords: Home health nursing, Multiple trauma, Home care services, Nurses, Content analysis, Quality of health care.

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Introduction

Trauma is a global health issue and one of the leading causes of death and disability in both developed and developing countries [1, 2]. Trauma refers to any type of penetrating or non-penetrating injury caused by external factors, such as traffic accidents, falls, drowning, burns, and other incidents [3, 4]. In Iran, trauma-related injuries are a significant public health concern, with high rates of mortality and complications [5]. Trauma from accidents is the second leading cause of death in Iran, surpassed only by cardiovascular diseases [6]. Providing proper and principled care for these patients plays a significant role in reducing mortality and preventing complications [7, 8].

In recent years, due to demographic and social changes, the rising prevalence of chronic diseases, technological advancements, and government efforts to reduce healthcare costs have led to an increased reliance on home care services [9, 10]. The development of home care is a key component of the healthcare system in developing countries [11]. Home care includes a range of services, such as patient and caregiver education, intravenous therapy or nutrition, wound care, injections, and monitoring of serious or unstable health conditions [12]. For trauma patients, home care services offer numerous benefits, such as preventing hospital readmissions, reducing complications, shortening hospital stays, lowering treatment costs, increasing the efficiency of healthcare centers, providing psychological comfort to patients and their families, reducing family expenses, and empowering patients and their families in self-care practices [9, 11, 13].

Despite the growing number of trauma patients requiring care and home care services [1, 2], most patients and their families prefer to seek post-discharge care in hospitals due to fear and concern about the quality of home care services [11, 14]. The quality of home care services and patients' concerns in this regard are important topics that have been investigated in various studies. Patients and their families often express concerns about the quality and continuity of care, access to medical equipment and resources, and the availability of psychological and social support. These studies highlighted the need to address these concerns and implement effective strategies to improve the quality of home care services [11, 14-18].

With the global rise in trauma-related injuries, the discharge of patients with ongoing care needs highlights the importance of high-quality home care services more than ever [7, 8, 19]. Given the lack of studies exploring methods to enhance the quality of home care services specifically for trauma patients, this study aimed to identify and explain strategies that nurses use to improve the quality of home care for trauma patients. By identifying and implementing effective strategies, this research aimed to bridge the gap between hospital discharge and the full recovery of trauma patients.

Home care, as a community-based care method, significantly influences the social abilities of individuals and their family members, as well as their interactions with the healthcare team within the context of personal, religious, and cultural values. These interactions are deeply dependent on the values of individuals and groups, making qualitative research an ideal method to gain deeper insights into this complex situation. Qualitative studies, which capture the opinions, live experiences, and feelings of individuals, can provide a more objective representation of the realities [20, 21]. Given the abstract and multifaceted nature of home care nursing, a qualitative approach can be useful for examining nurses' strategies to improve care quality for trauma patients. Therefore, this study employed a qualitative design to explore strategies for enhancing the quality of home care for trauma patients.

Materials and Methods

This study employed a conventional qualitative content analysis approach to explore strategies for enhancing the quality of home care for trauma patients. The study was conducted over 12 months, from September 2023 to September 2024, in Hamadan, located in northwest Iran. The study was conducted in-home care centers in Hamedan, as well as the home care units of Be'sat and Sina hospitals, and the homes of some patients. Conventional qualitative content analysis is a method that allows researchers to derive codes and themes directly from the data without predetermined assumptions. This approach is particularly useful for gaining a deeper understanding of the data and uncovering hidden patterns and implicit meanings, particularly when limited prior knowledge exists about the subject under investigation [22, 23].

The study participants included home care managers, nurses, trauma patients, and the family members of trauma patients. All participants were employed at home care centers in Hamadan. The inclusion criteria were as follows: The ability to communicate and understand Persian, home care managers with at least one year of management experience in home care, nurses with a minimum of one year of experience providing care to trauma patients in home settings, trauma patients who had experienced trauma within the past 6 months and were receiving home care, and family members who were directly involved in the home care of trauma patients. The exclusion criteria included unwillingness to continue participation or the occurrence of severe medical issues for the patients. An emergency medicine specialist also participated in this study (Table 1).

Participants were selected using purposive sampling to ensure the collection of rich and relevant data.

Table 1. Characteristics of Study Participants

Participant	Age (Years)	Sex	Education level	Work experience (Years)	Job
P1	40	Female	Ph.D.	16	Nurse
P2	52	Male	Master's Degree	18	Nurse
P3	54	Male	Bachelor's Degree	29	Home Care Center Manager
P4	45	Female	Bachelor's Degree	19	Nurse
P5	39	Male	Bachelor's Degree	16	Nurse
P6	35	Male	Bachelor's Degree	13	Home Care Center Manager
P7	42	Male	Bachelor's Degree	20	Nurse
P8	27	Male	Bachelor's Degree	6	Nurse
P9	32	Male	Bachelor's Degree	9	Nurse
P10	35	Male	Master's Degree	11	Nurse
P11	27	Male	Bachelor's Degree	5	Nurse
P12	54	Female	Bachelor's Degree	27	Home Care Center Manager
P13	23	Male	Bachelor's Degree	2	Nurse
P14	51	Male	Master's Degree	26	Nurse
P15	51	Female	Diploma	-	The family of the trauma patient
P16	58	Male	Specialist in Emergency Medicine	22	physician
P17	48	Male	Bachelor's Degree	-	Trauma patient
P18	28	Male	Bachelor's Degree	-	Trauma patient

To ensure maximum diversity in data collection, participants were chosen from different age groups, educational levels, work shifts, and home care centers, as well as both sexes.

Data Collection Procedure

Data were collected through semi-structured, open-ended interviews conducted individually by the principal investigator (Sh.F) in a private room at the home care centers. The interviews began with a warming-up phase, during which the researcher and participant introduced themselves. Then, a general question was asked: "Can you describe a typical day of home care?" Based on the participants' responses, follow-up questions were asked, such as "Can you describe your experience with home care for trauma patients?", "What strategies do you use to address the challenges of home care for trauma patients?", "What measures do you take to ensure patient safety?", "What actions do you take to improve the quality of home care services?", and "How do you plan care for each patient?".

Follow-up questions, such as "What do you mean?", "Can you give an example?", or "Can you explain further?", were used to clarify responses when necessary. With participants' prior consent, the interviews were recorded using a digital recorder. Each interview lasted between 45 to 60 minutes on average. Field notes were taken before, during, and after the interviews. The principal investigator listened to each interview several times immediately after completion to gain a deep understanding of the content. The interviews were then transcribed verbatim in Microsoft Office Word 2007 program and imported into MAXQDA software (version 20) for analysis. Subsequent interviews were conducted based on this framework. The interviews continued until data saturation was achieved, which occurred when no new subcategories or categories emerged, and the existing categories were fully developed in terms of dimensions and characteristics. In this study, data saturation was achieved after 16 interviews. However, two additional interviews were conducted with nurses, confirming that saturation had indeed been attained.

Statistical Analysis

The collected data were analyzed using Graneheim and Lundman's method for conventional qualitative content analysis [24]. The analysis process included the following steps:

Each interview was transcribed immediately after completion. The transcripts were read multiple times to gain a comprehensive understanding of the content. Keywords, sentences, or paragraphs relevant to the research question were identified as meaning units. Meaning units were condensed while preserving their core meaning. Codes were assigned to these condensed meaning units. Similar codes were grouped into broader categories, from which themes were developed to encapsulate the essence of the data. These themes were continuously reviewed and refined to ensure they accurately represented the data. Finally, a detailed report was prepared, including vivid examples and quotes to illustrate each theme.

The trustworthiness of the findings was ensured using Lincoln and Guba's criteria: credibility, dependability, confirmability, and transferability [25]. Credibility was enhanced through prolonged engagement with the study topic and validation of themes and categories by four participating nurses. To increase dependability, a limited review of relevant literature was conducted at the beginning of the study to minimize researcher bias in the data analysis process, and themes and categories were extracted directly from the participants' statements.

Confirmability was ensured by meticulously documenting the entire study process to allow for external verification by other researchers, and the data analysis was reviewed by the research team members. Transferability was achieved by comparing the study findings with the experiences of three non-participating home care nurses, including nurses of diverse ages, both sexes, and educational backgrounds [26].

Results

Table 1 provides a comprehensive overview of the participants' demographic and professional characteristics. A total of 18 interviews were conducted, including 11 nurses, three home care center managers, one physician, two trauma patients, and one family member of a trauma patient. The average age of the participants was 41.16±11 years, and the average work experience of the staff was 15.93±8.26 years. Fourteen participants (77.78%) were men, and 4 (22.22%) were women. Except for the family member of the trauma patient, who had a high school diploma, all participants had a Bachelor's degree or higher (Table 1).

After data analysis, 521 initial codes were generated, which were categorized into 36 subcategories, six main categories, and one overarching theme titled "Strategies for Improving the Quality of Home Care for Trauma Patients" (Table 2).

Strategies for Improving the Quality of Home Care for Trauma Patients

The main categories identified for enhancing the quality of home care for trauma patients included adherence to patient-centered principles, providing safe care, offering spiritual care, developing effective educational programs, enhancing service effectiveness, and ensuring the dynamism of service delivery. These categories were used as strategies to improve the quality of home care. Below, each of these categories and their corresponding subcategories are described, accompanied by examples of experiences shared by participants.

Table 2. Subcategories, Main Categories, and Theme

Theme	Main categories	Subcategories	
Strategies for Improving the Quality of Care for Trauma Patients	Adhering to the Principle of Patient-Centered Care	Coordinating services	
		Respecting patient values and preferences	
		Communicating to provide information	
		Ensuring physical comfort and emotional support	
		Involving patients and their families	
	Providing Safe Care for Trauma Patients	Adhering to infection control principles	
		Providing infection control training at home	
		Following ergonomic principles	
		Preventing fires	
		Preventing poisoning	
		Preventing falls	
		Practicing self-care for nurses	
		Reducing occupational threats	
		Ensuring the safety of service providers	
		Nurses' role in creating safety	
	Providing Spiritual Care	Facilitating worship	
		Understanding and empathizing	
		Respecting patient rights	
		Ensuring constant access to the nurse	
	Developing Effective Educational Programs	Stabilizing learning	
		Providing virtual education	
		Training on equipment use	
		Educating on warning signs	
		Providing dietary education	
		Teaching personal hygiene	
		Educating families on direct patient care	
		Providing need-based education	
	Enhancing Service Effectiveness	Designing Service Quality Indicators	
		Providing Care Based on Standards	
		Patient-Centered Care	
		Professional Care for Trauma Patients	
		Determining Actions During Care Failures	Maintaining Composure
			Requesting Support
	Dynamism in Service Delivery	Continuous Home Evaluations	
		Comprehensive Assessment at Each Visit	
		Follow-Up Calls	

Adherence to Patient-Centered Principles

Adhering to patient-centered principles in-home nursing care for trauma patients involves respecting patients' values and preferences, which fosters trust and ensures their needs are prioritized. Key strategies include:

Service Coordination: Ensuring seamless coordination among medical teams and support services to deliver integrated and effective care.

Effective Communication: Providing clear and understandable information to patients and their families to facilitate informed decision-making.

Additionally, both physical comfort and emotional support for patients should be prioritized. Nurses should address the physical needs of patients by creating a safe and comfortable environment while also providing emotional support to patients and their families to alleviate stress and anxiety.

Finally, involving patients and their families in the decision-making and care-planning process empowers them, fostering a greater sense of control and satisfaction. This collaborative approach encourages active participation in their recovery process. Collectively, these strategies can significantly enhance the quality of home care and increase satisfaction levels among patients and their families.

One home care nurse stated (P2), "... I gave a brief explanation of the care and asked for their preference on which task to perform first. Then, I started my work by checking vital signs..."

Providing Safe Care for Trauma Patients

One of the key indicators of service quality is safety, which affects not only the nurse and the patient but also the family in the home environment. To provide safe care for trauma patients at home, adherence to infection control principles is critical. These measures help prevent the transmission of infections and maintain the patient's health. Both nurses and families should receive training on infection control practices to effectively care for the patient and minimize infection risks. Adhering to ergonomic principles during patient handling and care is equally important to prevent physical injuries to both the nurse and the patient. Additionally, fire and poisoning prevention are other important aspects of safe care that require awareness and training to identify and mitigate potential home hazards. Fall prevention, through using appropriate equipment and creating a safe environment, can further reduce the risk of unwanted incidents.

Self-care for nurses is also of special importance, as nurses need to pay attention to their physical and mental health to provide optimal care. Reducing occupational threats and ensuring the safety of the service provider are also crucial, enabling nurses to work in a safe and stress-free environment. Ultimately, the nurse's ability to ensure safety for both the patient and themselves is crucial and should be carried out with precision and attention to all safety-related details. This approach not only improves the quality of home care but also enhances patient and family satisfaction.

An example of these experiences includes (P6): "... The first and simplest step is that nurses wash their hands with soap and water or alcohol before and after each contact with the patient or equipment. They should also use gloves, masks, goggles, and protective clothing, and dispose of them properly *after each use.".*

Providing Spiritual Care

Recognizing and addressing the spiritual dimension of individuals is a fundamental component of holistic care, and spirituality is a key focus area in nursing. In-home care settings, as in other care settings, attention to the spiritual aspects of patients is essential.

To provide spiritual care to trauma patients at home, facilitating worship practices is crucial. This helps patients maintain their spiritual connections and achieve greater peace of mind. Nurses should create an environment that allows patients to comfortably engage in their religious practices and rituals. Understanding and empathizing with patients is also of high importance. Nurses should actively listen and demonstrate empathy to better comprehend and address the spiritual and emotional needs of patients. Respecting patient rights is another part of spiritual care, which includes respecting their religious and cultural beliefs and values. Nurses must ensure they treat patients with dignity and avoid any form of discrimination or disrespect.

Continuous access to the nurse is also essential for providing effective spiritual care. Patients should feel confident that they can access their nurse at any time and benefit from their spiritual and psychological support. These strategies collectively contribute to improving the quality of spiritual care for trauma patients in home settings.

One trauma patient stated (P17), "... The reality is that the nurse's accessibility and responsiveness were better and easier. Given that she had provided us with her contact number and assured us that we could call her at any time, day or night, if we had any concerns. This made us feel much more at ease. We even had the option of online and video calls." and "... Whenever we were hopeless or frustrated, she offered reassurance, support, and empathy. Sometimes, when the situation called for it, she would lighten the mood with a joke, a smile, a story, or a memory. Her patience in listening to us always made us feel better...".

Developing Effective Educational Programs

Today, patient education is not only a skill but also a responsibility and a fundamental right of patients. In the home care setting, where nurses are not constantly present, the quality and effectiveness of education are more critical. To develop effective

educational programs in nursing care for trauma patients receiving home care, a thorough needs assessment of both patients and their families is essential. This ensures that education is tailored to the specific needs of each patient and family. Following the needs assessment, targeted education should be provided.

Virtual education serves as an innovative tool, offering flexible access to educational resources and enabling learning at any time and place. Training on the use of medical equipment is particularly important, as patients and their families need to be able to use the necessary devices correctly to avoid complications. Educating patients and families about warning signs helps them identify issues early and take necessary actions. Additionally, providing guidance on proper nutrition is essential for improving the health status of trauma patients and can accelerate the recovery process. Personal hygiene education helps patients and families prevent infections and other health issues. Educating families on direct patient care is also of special importance, as they play a significant role in daily patient care, especially for families who cannot afford professional home care services.

After providing education, reinforcing learning is of high importance. It is essential to ensure that patients and their families have well-understood and applied the taught concepts and skills. Therefore, evaluating the impact of education should be continuously conducted to ensure that educational programs have achieved their goals and make improvements if needed. Finally, it should not be limited to the hospitalization period but should extend beyond discharge to support patients and families throughout the recovery process.

A nurse stated in this regard (P5), "Given the limited time we have in each patient's home, we usually use summary brochures that we have prepared for catheters and other connections. We provide these to the family and also send the file to their mobile phones. We also provide some verbal explanations while performing the tasks to help them better understand the process."

Enhancing Service Effectiveness

To enhance the effectiveness of nursing care for trauma patients at home, it is essential to design quality service indicators. These indicators help in the continuous evaluation and improvement of service quality. Delivering care based on established standards is also necessary to ensure that all nursing actions are carried out with the best available practices. Care should be tailored to the patient's specific condition, meaning nurses should adjust their care based on the specific needs and status of each patient to achieve optimal outcomes. Providing professional care specifically to trauma patients is particularly critical, as these patients have distinct needs that should be met by skilled and trained nurses.

Planning for potential care failures is another key aspect. Nurses should have well-defined action plans to respond quickly and effectively in case of complications. Maintaining composure in critical situations and seeking support from other team members or external resources are essential skills that enable nurses to deliver the best possible care under challenging circumstances. Additionally, maintaining comprehensive records of the patient's condition and the care provided during previous sessions is crucial. These records serve as a valuable resource for nurses to ensure continuity and consistency in care.

A family caregiver of a trauma patient shared their experience (P15), "The nurse who visited our home performed her duties with professionalism, adhering to standards and ethical principles. She utilized her knowledge, skills, and experience effectively and was accountable for her performance. When necessary, she respected and incorporated feedback from me and my mother to improve her care."

Dynamism in Service Delivery

Providing home care services is a dynamic and continuous process. Continuous assessment at home is of high importance, as it enables nurses to monitor the patient's condition regularly and make necessary adjustments to the care plan. A comprehensive assessment during each visit is also essential to thoroughly examine all aspects of the patient's health, including physical, psychological, and social well-being, ensuring that no aspect of care is overlooked. Telephone follow-up as a complementary tool can help nurses monitor the patient's condition between in-person visits and provide timely guidance or recommendations when needed. These strategies collectively enhance the quality and responsiveness of home nursing services and ultimately increase patient and family satisfaction.

In this regard, a nurse explained (P12), "... Our goal in telephone follow-up of home patients is to assess the effectiveness of the education provided, ensure adherence to medication schedules according to the instructions, and determine if a clinic or hospital visit is necessary."

Discussion

This study aimed to identify strategies for improving the quality of home care for trauma patients. Six main categories were extracted from the study data: patient-centered care, safe care, spiritual care, development of effective educational programs, enhancement of service effectiveness, and dynamism in service delivery. These categories provided a comprehensive framework for enhancing the quality of home care services for trauma patients.

A key strategy employed by nurses to enhance the quality of home care services for trauma patients

was adherence to patient-centered care principles. According to a study by McCormack and McCance (2021), patient-centered care prioritized respecting patients' values, preferences, and needs, [27] which aligned with the experiences reported by nurses in this study.

Nurses in this study implemented several strategies to achieve this, including respecting patients' values and preferences, coordinating services through online records and systems, facilitating communication by providing information through center representatives, and following up with families. Furthermore, a study by Sanerma *et al.* (2020) highlighted the importance of effective communication in-home care management, reinforcing the need for clear information sharing to promote patient engagement. Additionally, nurses addressed the physical, psychological, social, and spiritual needs of patients and their families, adopting a holistic approach. Sassen (2023) supported this approach, noting that addressing these multifaceted requirements contributed significantly to improved patient satisfaction and outcomes. Additionally, the involvement of patients and families in care planning and prioritization is critical. Lynch et al. (2019) demonstrated that engaging patients and their families in decision-making processes enhanced their commitment to care plans and improved overall satisfaction with home services [28]. By implementing these strategies, nurses could provide more comprehensive and effective home care to trauma patients.

One of the most important aspects of improving the quality of home care is ensuring safety for the patient, family, and care provider. The safety domain is extensive, encompassing a range of measures such as adhering to infection control standards, following ergonomic principles to maintain the health of both the patient and nurse, implementing fire and poisoning precautions, and preventing falls. Additionally, the nurse plays a vital role in creating a safe environment for themselves and their colleagues, as well as prioritizing self-care to maintain their own well-being.

Sama *et al.'s* study, consistent with our findings, utilized a safety manual managed by home care nurses to design and evaluate the effectiveness of safety interventions in home care. This approach helped patients establish safer psychological and physical conditions at home [29]. Similarly, Gaspar's study highlighted the importance of technology-based training and the integration of innovations such as telehealth. It also emphasized the proper use of personal protective equipment (PPE) and training and evaluating safety compliance at home to improve patient quality of life and nurse comfort [30]. Another study focusing on the sense of security among the elderly identified three categories: "feeling comfortable in their own home, the ability to influence and maintain independence, and the ability to trust home care staff". This interaction fostered a sense of security, enabling the elderly to actively participate in self-care. By encouraging open dialogue and affirming and accepting each other's feelings, thoughts, and opinions, a supportive environment was created that promotes mutual understanding and collaboration [31]. These findings were consistent with the codes identified in our study regarding the nurse's role in creating a sense of security for the patient. This included creating an environment that promoted emotional and physical security, respecting the patient's independence and choices, and collaborating with them in decision-making. These elements served as a foundation for understanding how the physical home environment and social interactions influence one another, as well as how they shape the patient's experiences of feeling secure at home.

Providing spiritual care to trauma patients in home settings is a critical aspect of holistic nursing practice, significantly enhancing patient well-being. Recognizing and addressing the spiritual dimension of care is essential, as it enables patients to maintain their spiritual connections and find peace of mind during challenging times. Nurses can support these needs by facilitating worship and creating an environment that accommodates religious practices. Active listening and empathy are equally important, allowing nurses to understand patients' feelings and spiritual requirements and ensuring that care is tailored to individual beliefs and values. Respecting patients' rights, including their religious and cultural beliefs, is fundamental to providing compassionate care and avoiding discrimination. Furthermore, ensuring continuous access to nursing support fosters a sense of security and reassurance, enabling patients to seek spiritual and psychological assistance whenever needed. By implementing these strategies, nurses can significantly enhance the quality of spiritual care, ultimately contributing to the overall recovery and satisfaction of trauma patients receiving home care. A study by Tso *et al.* identified that spiritual care, which included nurturing a patient's spirituality through active listening and understanding, significantly enhanced patients' overall satisfaction and aided in coping with their illnesses [32]. Similarly, research conducted by Ghorbani *et al.,* emphasized that integrating spiritual care into regular nursing practice effectively addressed the holistic needs of patients, leading to improved emotional and psychological well-being [33]. These findings further underscored the necessity of implementing comprehensive spiritual care strategies for trauma patients in home settings.

In the context of developing effective educational programs for home care of trauma patients, the present study identified several critical strategies employed by nurses. These strategies included stabilizing the learning process, utilizing virtual education, providing training on the use of medical

equipment, educating patients about warning signs, offering dietary guidance, and instructing on personal hygiene practices. Additionally, educating family members on patient care is emphasized, alongside tailoring educational content to meet the unique needs of each patient. Evaluating the effectiveness of the education provided and ensuring ongoing training within hospital settings are also essential components. By integrating these strategies, nurses can facilitate a comprehensive educational approach that enhances patient understanding and self-management, ultimately improving overall health outcomes in the home care environment. Such initiatives are pivotal in empowering patients and their families to actively participate in their care, fostering better recovery and improved quality of life following trauma. Similarly, Vandiver *et al.,* highlighted the importance of family education in managing chronic illnesses, demonstrating how family involvement could significantly enhance the effectiveness of patient education programs [34]. Modica *et al.,* explored the effectiveness of virtual education interventions, demonstrating that technology could facilitate training and improve health literacy among patients and caregivers [35]. Collectively, these studies reinforced the critical role of effective educational strategies in improving health outcomes for patients receiving home care. Participants in Breen *et al.'s* study also identified key factors for quality home care, including increased support through continuous education, specialized training on dementia, enhanced teamwork among care providers, increased wages, sufficient and qualified staff, and improved information exchange with patients [36].

Service effectiveness is defined as the achievement of specific, predetermined care goals. This study identified several key actions to enhance the effectiveness of in-home care for trauma patients, including the development of service quality indicators, the provision of care based on established standards, adaptive care responsive to individual patient conditions, specialized professional care for trauma patients, and the implementation of corrective measures in cases of care failures. Consistent with the present study, the results showed that the main variables determining the effectiveness of home care included the physical and mental health of caregivers, patient self-care capabilities, and adherence to standards and care principles by home care nurses [37].

The dynamism of home care services also plays a crucial role in improving the quality of nursing care for trauma patients. Home care services are a dynamic and continuous process requiring ongoing attention and adaptation. Continuous home assessment and comprehensive evaluation during each visit, along with telephone follow-up as a complementary tool, enable nurses to monitor the patient's condition between visits and provide necessary guidance and recommendations when needed. This dynamic nature significantly enhances the quality of nursing care for trauma patients in home settings. Research indicated that continuous assessment and comprehensive evaluations during each visit, combined with telephone follow-ups, enabled nurses to closely monitor patients' conditions and provide timely guidance [38]. This ongoing interaction is essential for adjusting care plans and ensuring patient safety and well-being in home settings [39].

The findings of this study had significant implications for clinical practice in home care settings. By implementing patient-centered care strategies, nurses can ensure that the values, preferences, and needs of trauma patients are respected, leading to improved patient satisfaction and outcomes. Emphasizing safety through adherence to infection control standards, ergonomic principles, and comprehensive safety protocols can protect both patients and care providers. Additionally, integrating spiritual care into nursing practice addresses the holistic needs of patients, enhancing their emotional and psychological well-being. Effective educational programs tailored to the needs of patients and their families can empower them to actively participate in their care, fostering better recovery and improved quality of life. Additionally, the dynamic nature of home care services, characterized by continuous assessment and follow-up, enables timely adjustments to care plans, ensuring patient safety and well-being. These strategies collectively enhance the quality of home care for trauma patients, highlighting the importance of comprehensive, patient-centered, and adaptive care approaches in achieving optimal health outcomes.

The strengths of this study included its use of qualitative methodology and content analysis, which provided a deeper understanding of participants' experiences. The diversity of participants, comprising home care managers, nurses, trauma patients, and their families from five home care centers in Hamedan, enhanced the comprehensiveness of the results. However, the study had limitations common to qualitative research, such as the focus on a single geographical location (Hamedan) and the use of purposive sampling, which might limit the generalizability of the findings. Additionally, some families declined to allow the researcher into their homes due to concerns about patient and family privacy. Finally, nurses and center managers might have shared insights influenced by their experiences with non-trauma patients as well.

The findings of the present study showed that nurses employed strategies to improve the quality of home care services for trauma patients. These strategies included "adhering to the principle of patient-centered care, providing safe care for trauma patients, providing spiritual care, developing effective educational programs, enhancing service effectiveness, and dynamism in service delivery."

Implementing these strategies could serve as a comprehensive guide for policymakers and home care nurses to improve the quality of care for trauma patients and increase patient and family satisfaction. The findings of this research could support better planning and implementation of home care services and ultimately facilitate the transition of trauma patients from hospital to home.

Future research should aim to expand the geographical scope of this study to include a broader range of regions and populations, thereby increasing the generalizability of the findings. Additionally, investigating the effects of specific training programs on the quality of home care services and patient outcomes could provide valuable insights. It is also recommended to investigate the long-term impacts of implementing patient-centered care and safety protocols within home care settings. Furthermore, future studies should incorporate the perspectives of patients and their families to ensure that care strategies are aligned with their needs. Lastly, employing alternative methodologies in research could facilitate the development of innovative care models based on these strategies, ultimately enhancing the quality of home care services.

Declaration

Ethics approval and consent to participate: This study was approved by the Ethics Committee of Hamadan University of Medical Sciences with the code IR.UMSHA.REC.1401.242, and permission to conduct the research was obtained from the managers of the home care centers. Before the study began, participants were informed about the study's objectives, data collection methods, the voluntary nature of their participation, permission to record the interviews and the confidentiality and anonymity of their information.

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